

Vertical ASCO CO₂ Storage Tanks

Vacuum insulated

ASCO vertical CO₂ tanks include a high quality perlite vacuum insulation and are supplied complete with all pipework, valves, safety devices, liquid level indicator, pressure gauge, automatic pressure build up and pressure reducing systems allowing fast and easy installation on site.

The inner tank is made of stainless steel. The outer vessel has a durable protective coating to guard against corrosion.

All interconnecting pipework is made of stainless steel. Special connections are included to allow easy installation of ancillary equipment such as vaporisers, cylinder filling systems, transfer pumps and dry ice machines.

ASCO vertical tanks can also be configured for other liquefied cryogenic gases (N₂, O₂, Ar).

- **compact**
- **simple and safe to operate**
- **easily installed**
- **fully automatic**



37 t vertical **ASCO** CO₂- Storage Tank, vacuum insulated

ADVANTAGES OF ASCO VERTICAL, VACUUM INSULATED CO2 STORAGE TANK:

- Maintenance free
- No power consumption
- Installation is straightforward
- Safe shipment of large tanks is possible as there is no risk of damage to insulation
- All pipework on vacuum insulated tanks are made from stainless steel
- Vacuum insulated tanks include automatic pressure build up and pressure reducing systems
- Vertical storage tanks are much more efficient than PU-insulated horizontal tanks of similar capacity
- Special connections are included to allow easy installation of vaporisers, cylinder filling systems, transfer pumps and dry ice machines
- Tanks can be ordered with different pipework arrangement for other liquefied cryogenic gases (Nitrogen, Oxygen, Argon)



Specification

Inner vessel:	Stainless steel	Piping:	Stainless Steel
Outer vessel:	Carbon steel	Contents gauge:	Differential pressure measuring device (outlet 4-20 mA)
Max working pressure:	22 bar	Fill connections:	All current standard connections
Insulation:	High quality vacuum-perlite	Approval:	PED 97/23/EG or AD2000 and other international codes
Pressure build up + Pressure reducing:	Automatic systems included	Pipework arrangement:	Specially designed for CO2 or cryogenic gases applications

ASCO reserves the right to modify these specifications without prior notice.



ASCO's vacuum insulated storage tanks are designed for easy handling and installation on site.

The stainless steel pipework offers the possibility to connect the following equipment to the tank:

- Cylinder filling systems
- CO2 vaporisers
- Dry Ice Pelletizers / Block machines
- CO2 Production Plants
- CO2 Recovery Systems
- CO2 Transfer Pumps



Manufacturing vertical, vacuum insulated storage tanks.

TYPICAL ASCO CO2 PIPEWORK ARRANGEMENT



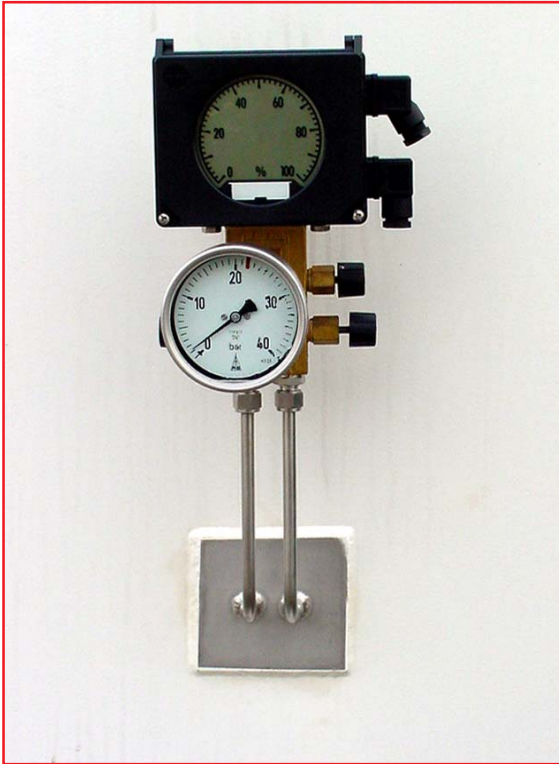
All pipework and valves are made in stainless steel. Automatic Pressure build up and pressure reducing systems are standardly included to provide stable tank pressure condition. Each component is clearly labeled and corresponds to the mutually agreed flow diagram which is affixed to each tank.

Optional:

If a tank is used for storing CO2 without regular withdrawal, a refrigeration unit can be supplied underneath the tank in a closed cabinet premounted and prewired, ready for immediate use.



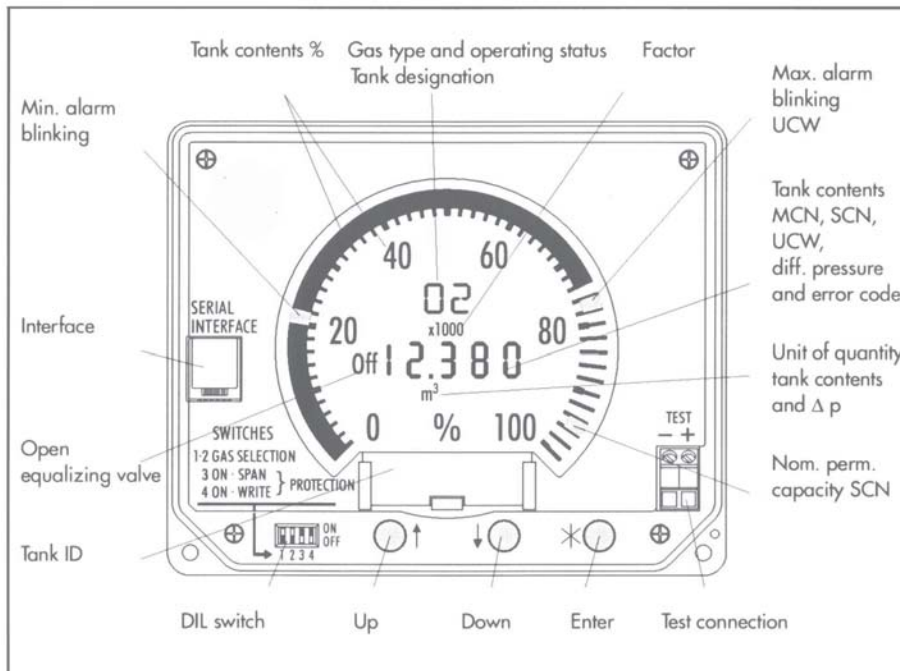
PRESSURE AND LEVEL INDICATOR



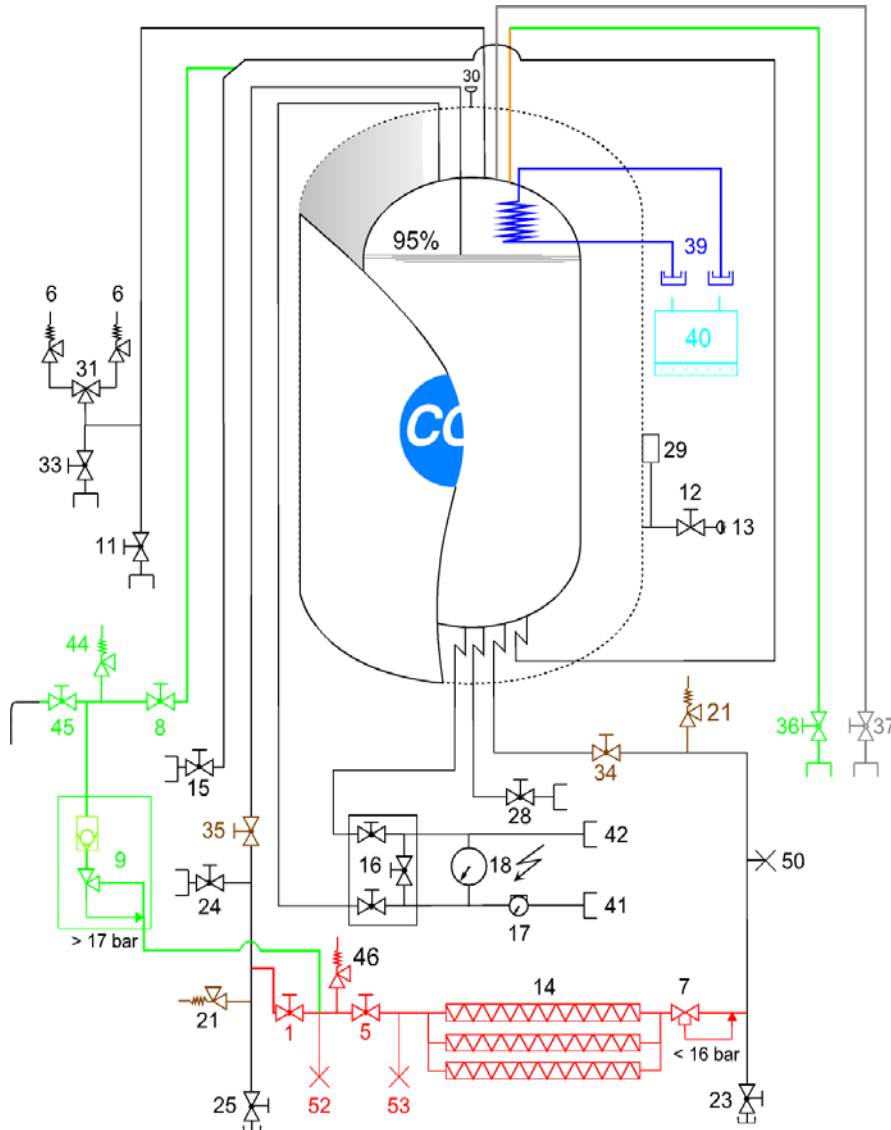
Accurate digital level indicator shows the net content in the tank on a display in kg and % full.

The indicator works with a measuring diaphragm and springs designed for a certain measuring span.

The movement of the measuring diaphragm and lever, which is proportional to the differential pressure, is led by the elastic disc out of the pressure chamber and converted by the displacement sensor into an electrical signal, (outlet 4 - 20mA). Remote monitoring is therefore possible.

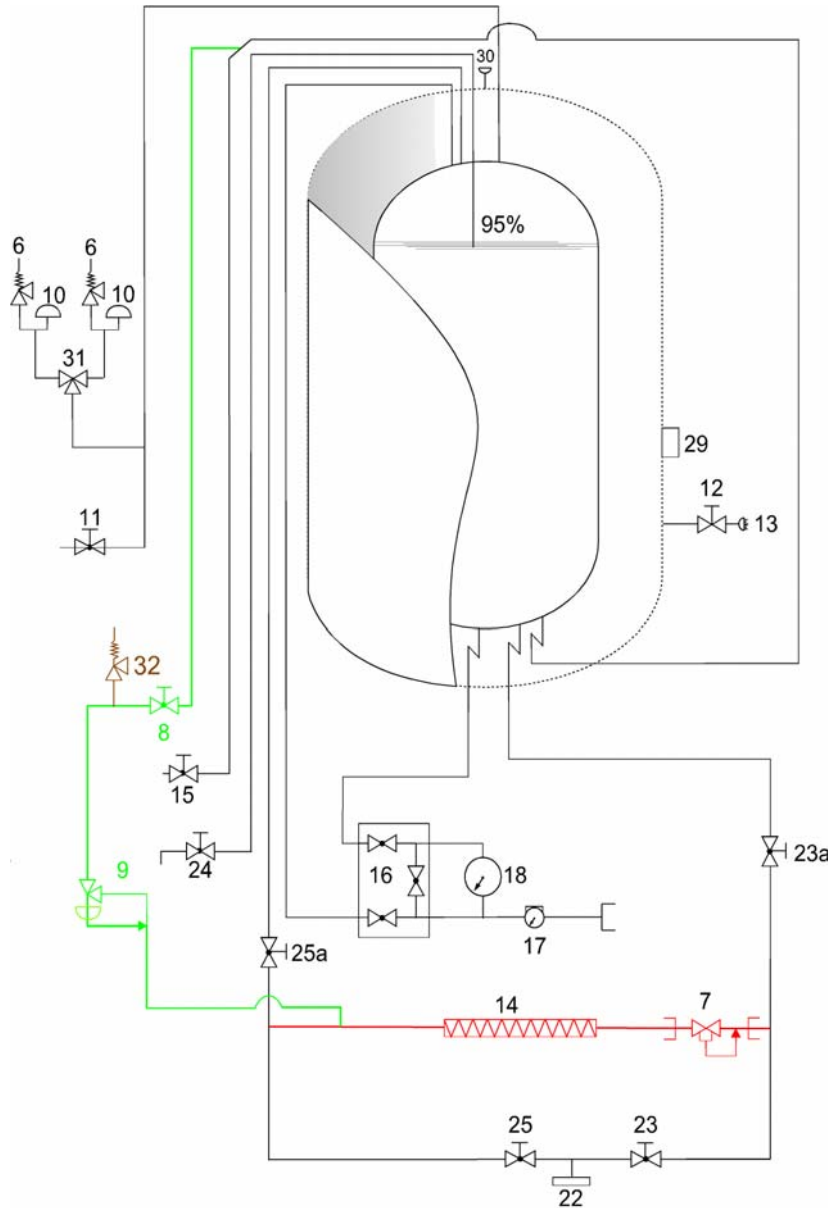


STANDARD ASCO CO2 FLOW DIAGRAM No. 300



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|----|---|----|---|
| 1 | Shut-off valve in pressure building and reducing system | 28 | Liquid withdrawal connection (e.g. pump) |
| 5 | Shut-off valve in pressure building system | 29 | Evacuation connection |
| 6 | Main safety valve | 30 | Vacuum bursting disk for outer tank |
| 7 | Pressure building regulator | 31 | Change over valve |
| 8 | Shut-off valve in pressure reducing system | 33 | Vent valve |
| 9 | Pressure reducing regulator | 34 | Back-off valves on main liquid line |
| 11 | Vent Valve | 35 | Shut-off valves on main line gas line |
| 12 | Vacuum probe valve | 36 | Gas withdrawal valve |
| 13 | Vacuum probe with connection for tester | 37 | Gas line with valve |
| 14 | Pressure building vaporizer | 39 | Cooling coil (optional) |
| 15 | Liquid withdrawal valve (to vaporize) | 40 | Refrigeration system 220 V (optional) |
| 16 | Three valve manifold | 41 | Connection for pressure measuring |
| 17 | Pressure gauge | 42 | Capped connection without valve |
| 18 | Liquid level indicator | 44 | Line safety valve |
| 21 | Line safety valves | 45 | To CO2 plant / or for venting to atmosphere |
| 23 | Liquid phase fill valve | 46 | Line safety valve |
| 24 | Over flow valve | 50 | additional connection, plugged |
| 25 | Gas fill valve | | |

**STANDARD ASCO CRYOGENIC FLOW DIAGRAM No. 800
(FOR LIN, LOX, LAR)**



- | | | | |
|----|--|-----|-------------------------------------|
| 6 | Main safety valve | 18 | Liquid level indicator |
| 7 | Pressure building regulator | 22 | Fill connection |
| 8 | Shut-off valve in pressure reducing system | 23 | Liquid phase fill valve |
| 9 | Pressure reducing regulator | 23a | Liquid phase valve |
| 10 | Inner tank bursting head | 24 | Over flow valve |
| 11 | Vent Valve | 25 | Gas phase fill valve |
| 12 | Vacuum probe valve | 25a | Gas phase valve |
| 13 | Vacuum probe | 29 | Evacuation connection |
| 14 | Pressure building vaporizer | 30 | Vacuum bursting disk for outer tank |
| 15 | Product withdrawal valve | 31 | Change over valve |
| 16 | Three valve manifold | 32 | Section safety valve |
| 17 | Pressure gauge | | |

All about



Besides CO2 Storage tanks we also manufacture and supply:

- Automatic CO2 Production Plants
- CO2 Stack Gas Recovery Plants
- CO2 Gas Recovery Systems for Dry Ice Machines
- Automatic Dry Ice Slices/Block/Pelletizer Machines
- Dry Ice Blasting Systems **ASCOJET**
- CO2 and Cryogenic Static and Transportable Tanks
- CO2 Cylinder Filling Systems
- CO2 Atmospheric Vaporisers
- CO2 Detectors
- CO2 Flowmeters
- Low to Low Pressure CO2 Transfer Pumps
- CO2 Testing Equipment (Dew Point / Purity / Carbonation)
- Ancillary CO2 Equipment

Contact us for further details or offer:

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